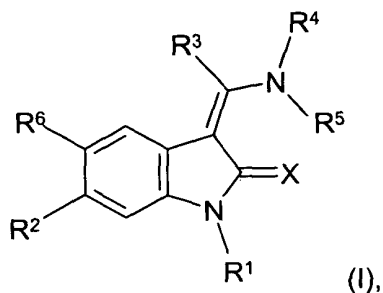


What is claimed is:

1. A compound of the formula



in which

- 10 X is an oxygen atom,

R<sup>1</sup> is a hydrogen atom,

R<sup>2</sup> is a fluorine, chlorine or bromine atom or a cyano group,

15

R<sup>3</sup> is a phenyl group or a phenyl group which is monosubstituted by a fluorine, chlorine, bromine or iodine atom or by a C<sub>1-3</sub>-alkoxy group, where the abovementioned unsubstituted and the monosubstituted phenyl groups may additionally be substituted in the 3- or 4-position

20

by a fluorine, chlorine or bromine atom,

by a cyano group,

25

by a C<sub>1-3</sub>-alkoxy or C<sub>1-2</sub>-alkyl-carbonyl-amino group,

by a cyano-C<sub>1-3</sub>-alkyl, carboxy-C<sub>1-3</sub>-alkyl, carboxy-C<sub>1-4</sub>-alkoxy, carboxy-C<sub>1-3</sub>-alkylamino, carboxy-C<sub>1-3</sub>-alkyl-N-(C<sub>1-3</sub>-alkyl)-amino, C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>1-3</sub>-

alkyl, C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>1-3</sub>-alkoxy, C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>1-3</sub>-alkylamino, C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>1-3</sub>-alkyl-N-(C<sub>1-3</sub>-alkyl)-amino, amino-C<sub>1-3</sub>-alkyl, amino-carbonyl-C<sub>1-3</sub>-alkyl, (C<sub>1-2</sub>-alkylamino)-carbonyl-C<sub>1-3</sub>-alkyl, di-(C<sub>1-2</sub>-alkyl)-amino-carbonyl-C<sub>1-3</sub>-alkyl, (C<sub>1-2</sub>-alkyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (C<sub>1-4</sub>-alkoxy-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (C<sub>3-6</sub>-alkyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (phenyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (C<sub>3-6</sub>-cycloalkyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (C<sub>3-6</sub>-cycloalkyl-C<sub>1-3</sub>-alkyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (thiophen-2-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (furan-2-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (phenyl-C<sub>1-3</sub>-alkyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (2-(C<sub>1-4</sub>-alkoxy)-benzoyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (pyridin-2-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (pyridin-3-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl-, (pyridin-4-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl- or C<sub>1-3</sub>-alkyl-piperazin-1-yl-carbonyl-C<sub>1-3</sub>-alkyl group,

by a carboxy-C<sub>2-3</sub>-alkenyl, aminocarbonyl-C<sub>2-3</sub>-alkenyl, (C<sub>1-3</sub>-alkylamino)-carbonyl-C<sub>2-3</sub>-alkenyl, di-(C<sub>1-3</sub>-alkyl)-amino-carbonyl-C<sub>2-3</sub>-alkenyl or C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>2-3</sub>-alkenyl group,

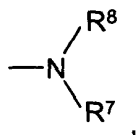
where the substituents may be identical or different,

R<sup>4</sup> is a phenyl group or a phenyl group which is monosubstituted

by a C<sub>1-3</sub>-alkyl group which is terminally substituted by an amino, guanidino, mono- or di-(C<sub>1-2</sub>-alkyl)-amino-, N-[ω-di-(C<sub>1-3</sub>-alkyl)-amino-C<sub>2-3</sub>-alkyl]-N-(C<sub>1-3</sub>-alkyl)-amino, N-methyl-(C<sub>3-4</sub>-alkyl)-amino, N-(C<sub>1-3</sub>-alkyl)-N-benzylamino, N-(C<sub>1-4</sub>-alkoxycarbonyl)-amino, N-(C<sub>1-4</sub>-alkoxycarbonyl)-C<sub>1-4</sub>-alkylamino, 4-(C<sub>1-3</sub>-alkyl)-piperazin-1-yl, imidazol-1-yl, pyrrolidin-1-yl, azetidin-1-yl, morpholin-4-yl, piperazin-1-yl, thiomorpholin-4-yl group,

by a di-(C<sub>1-3</sub>-alkyl)-amino-(C<sub>1-3</sub>-alkyl)-sulphonyl, 2-[di-(C<sub>1-3</sub>-alkyl)-amino]-ethoxy, 4-(C<sub>1-3</sub>-alkyl)-piperazin-1-yl-carbonyl, {ω-[di-(C<sub>1-3</sub>-alkyl)-amino]-(C<sub>2-3</sub>-alkyl)}-N-(C<sub>1-3</sub>-alkyl)-amino-carbonyl, 1-(C<sub>1-3</sub>-alkyl)imidazol-2-yl, (C<sub>1-3</sub>-alkyl)-sulphonyl group, or

by a group of the formula



in which

5  $\text{R}^7$  is a  $\text{C}_{1-2}$ -alkyl,  $\text{C}_{1-2}$ -alkyl-carbonyl, di- $(\text{C}_{1-2}$ -alkyl)-amino-carbonyl- $\text{C}_{1-3}$ -alkyl or  $\text{C}_{1-3}$ -alkylsulphonyl group and

$\text{R}^8$  is  $\text{C}_{1-3}$ -alkyl,  $\omega$ -[di- $(\text{C}_{1-2}$ -alkyl)-amino]- $\text{C}_{2-3}$ -alkyl,  $\omega$ -[mono- $(\text{C}_{1-2}$ -alkyl)-amino]- $\text{C}_{2-3}$ -alkyl group, or

10 a  $(\text{C}_{1-3}$ -alkyl)-carbonyl,  $(\text{C}_{4-6}$ -alkyl)-carbonyl or carbonyl- $(\text{C}_{1-3}$ -alkyl) group which is terminally substituted by a di- $(\text{C}_{1-2}$ -alkyl)-amino, piperazin-1-yl or 4- $(\text{C}_{1-3}$ -alkyl)-piperazin-1-yl group,

15 where all dialkylamino groups present in the radical  $\text{R}^4$  may also be present in quaternized form, for example as an N-methyl-(N,N-dialkyl)-ammonium group, where the counterion is preferably selected from the group consisting of iodide, chloride, bromide, methylsulphonate, para-toluenesulphonate and trifluoroacetate,

20  $\text{R}^5$  is a hydrogen atom and

$\text{R}^6$  is a hydrogen atom,

25 where the abovementioned alkyl groups include linear and branched alkyl groups in which additionally one to 3 hydrogen atoms may be replaced by fluorine atoms,

where additionally a carboxyl, amino or imino group present may be substituted by an in vivo cleavable radical or may be present in the form of a prodrug radical, for example in the form of a group which can be converted in vivo into a carboxyl group  
30 or in the form of a group which can be converted in vivo into an imino or amino group,

and its tautomers, enantiomers, diastereomers, mixtures thereof and salts thereof.

5            2.        A compound of the formula I according to Claim 1 in which

X, R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are as defined in Claim 1 and

10            R<sup>3</sup> is a phenyl group which is substituted

by a C<sub>1-2</sub>-alkyl-carbonyl-amino group,

15            by a carboxy-C<sub>1-3</sub>-alkyl, carboxy-C<sub>1-4</sub>-alkoxy, C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>1-3</sub>-alkyl,  
C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>1-3</sub>-alkoxy, aminocarbonyl-C<sub>1-3</sub>-alkyl, (C<sub>1-2</sub>-alkylamino)-  
carbonyl-C<sub>1-3</sub>-alkyl, di-(C<sub>1-2</sub>-alkyl)-aminocarbonyl-C<sub>1-3</sub>-alkyl, (C<sub>1-2</sub>-alkyl-  
20            carbonyl)-amino-C<sub>1-3</sub>-alkyl, (C<sub>1-4</sub>-alkoxy-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (phenyl-  
carbonyl)-amino-C<sub>1-3</sub>-alkyl, (C<sub>3-6</sub>-cycloalkyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (C<sub>3-6</sub>-  
cycloalkyl-C<sub>1-3</sub>-alkyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (thiophen-2-yl-carbonyl)-  
amino-C<sub>1-3</sub>-alkyl, (furan-2-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (phenyl-C<sub>1-3</sub>-alkyl-  
20            carbonyl)-amino-C<sub>1-3</sub>-alkyl, (2-(C<sub>1-4</sub>-alkoxy)-benzoyl-carbonyl)-amino-C<sub>1-3</sub>-alkyl,  
(pyridin-2-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl, (pyridin-3-yl-carbonyl)-amino-C<sub>1-3</sub>-  
alkyl, (pyridin-4-yl-carbonyl)-amino-C<sub>1-3</sub>-alkyl or C<sub>1-3</sub>-alkyl-piperazin-1-yl-  
carbonyl-C<sub>1-3</sub>-alkyl group,

25            by an aminocarbonyl-C<sub>2-3</sub>-alkenyl, (C<sub>1-3</sub>-alkylamino)-carbonyl-C<sub>2-3</sub>-alkenyl, di-  
(C<sub>1-3</sub>-alkyl)-amino-carbonyl-C<sub>2-3</sub>-alkenyl or C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>2-3</sub>-alkenyl  
group.

30            3.        A compound of the formula I according to Claim 1 in which

X, R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are as defined in Claim 1 and

R<sup>3</sup> is a phenyl group substituted by a carboxy-C<sub>1-3</sub>-alkyl or C<sub>1-4</sub>-alkoxy-carbonyl-C<sub>1-3</sub>-  
alkyl group.

4. A compound of the formula I according to any of Claims 1 to 3, in which

X, R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are as defined in any of Claims 1 to 3 and

5

R<sup>2</sup> is a fluorine or chlorine atom.

5. A compound of the formula I according to Claim 1, selected from the following group:

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(a) 3-Z-[1-(4-dimethylaminomethyl)anilino]-1-(3-(2-carboxyethyl)phenyl)methylene]-6-chloro-2-indolinone

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(b) 3-Z-[1-(4-dimethylaminomethyl)anilino]-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

(c) 3-Z-[1-(4-dimethylaminomethyl)anilino]-1-(3-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

20

(d) 3-Z-[1-(4-(N-(4-methylpiperazin-1-yl)methylcarbonyl)-N-methylamino)anilino]-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

25

(e) 3-Z-[1-(4-(N-(2-dimethylaminoethyl)-N-methylsulphonylamino)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

(f) 3-Z-[1-(4-(N-(3-dimethylaminopropyl)-N-acetylamino)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

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(g) 3-Z-[1-(4-(1-methylimidazol-2-yl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

(h) 3-Z-[1-(4-(N-(dimethylaminomethylcarbonyl)-N-methylamino)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

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(i) 3-Z-[1-(4-(N-(2-dimethylaminoethylcarbonyl)-N-methylamino)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

(j) 3-Z-[1-(4-(pyrrolidin-1-ylmethyl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

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(k) 3-Z-[1-(4-(diethylaminomethyl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-fluoro-2-indolinone

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(l) 3-Z-[1-(4-(2-dimethylaminoethyl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-chloro-2-indolinone

(m) 3-Z-[1-(4-dimethylaminomethyl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-chloro-2-indolinone

5 (n) 3-Z-[1-(4-(pyrrolidin-1-ylmethyl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-chloro-2-indolinone

(o) 3-Z-[1-(4-(pyrrolidin-1-ylmethyl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-bromo-2-indolinone

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(p) 3-Z-[1-(4-(dimethylaminomethyl)anilino)-1-(4-(2-carboxyethyl)phenyl)methylene]-6-bromo-2-indolinone

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(q) 3-Z-[1-(4-(diethylaminomethyl)anilino)-1-(4-(2-carboxyethyl)-methylene)-6-bromo-2-indolinone

and their salts.

6. A physiologically acceptable salt of a compound according to any one of  
20 Claims 1, 2, 3 or 5.

7. A physiologically acceptable salt of a compound according to Claim 4.

8. A medicament comprising a compound of the formula I according to any  
25 one of Claims 1, 2, 3 or 5, and one or more inert carrier materials and/or diluents.

9. A medicament, comprising a compound of the formula I according to Claim 4, and one or more inert carrier materials and/or diluents.

30 10. A medicament, comprising a physiologically acceptable salt according to Claim 6, and one or more inert carrier materials and/or diluents.

11. A medicament, comprising a physiologically acceptable salt according to Claim 7, and one or more inert carrier materials and/or diluents.

35 12. A method for treating excessive or abnormal cell proliferation comprising administering a compound of the formula I according to any one of Claims 1, 2, 3, or 5.

13. A method for treating excessive or abnormal cell proliferation comprising administering a compound of the formula I according to Claim 4.

5        14. A method for treating excessive or abnormal cell proliferation comprising administering a physiologically acceptable salt according to Claim 6.

15. A method for treating excessive or abnormal cell proliferation comprising administering a physiologically acceptable salt according to Claim 7.